Introduction

Version 7 of EnSight, while continuing to read EnSight 5 and EnSight 6 formats, defines a new data format that is essentially the same as that of EnSight 6, except that its parts are self contained - allowing for much improved efficiency in both read times and memory use. The EnSight Gold format loaded into EnSight through the *Case* mechanism. A case file provides all the information needed for an entire dataset, including filenames and descriptions of any geometry or variable files needed, constant descriptions and values, time set information etc.

Reading data into EnSight is a two-step process. First, the appropriate files are selected. This step is largely the same regardless of the format of the data being read. Second, parts are constructed using an interface that is specific to the applicable data format. This article covers the second step for EnSight 6 data. See **How To Read Data** for more information on selecting the appropriate files.

EnSight Gold datasets consist of the following files. Note that the entry in the File Name column is only a suggestion, it typically does not matter to EnSight what the actual file name is.

File	File Name	Notes	Required?
Case	file.case	Provides additional information about the dataset (such as time information) as well as pointers to the files actually containing the geometry, measured, boundary, and variable data.	yes
Geometry	file.geo	Contains coordinates and element connectivity.	yes
Scalar Variable	file.scl	Each scalar variable file contains one value per node or element defined in the geometry file.	optional
Vector Variable	file.vec	Each vector variable file contains three values per node or element defined in the geometry file.	optional
Tensor Variable	file.ten	Each tensor variable file contains six (symmetric) or nine (asymmetric) values per node or element defined in the geometry file.	optional
Measured, Boundary, etc.	*	Measured results, geometry, and variable files. Boundary definition files for structured data.	all optional

Basic Operation

After you have specified the appropriate data files with the File Selector (opened with File > Data (Reader)... as discussed in **How To Read Data**) and clicked Okay, the Data Part Loader (Case) dialog will open. You use this dialog to build the desired parts. Since the EnSight Gold format supports both structured and unstructured data, you can select the type of parts you wish to build and the dialog's interface will change accordingly.

To build **unstructured** parts from the EnSight Gold format data:

1. **If the Data Part Loader dialog is not open, select File > Data (Part Loader)...**

   The available parts are listed in the Parts List. You can build them all by clicking Load All at the bottom. Alternately, you can build them one by one and choose a different visual representation and part name for each. To build selected parts:

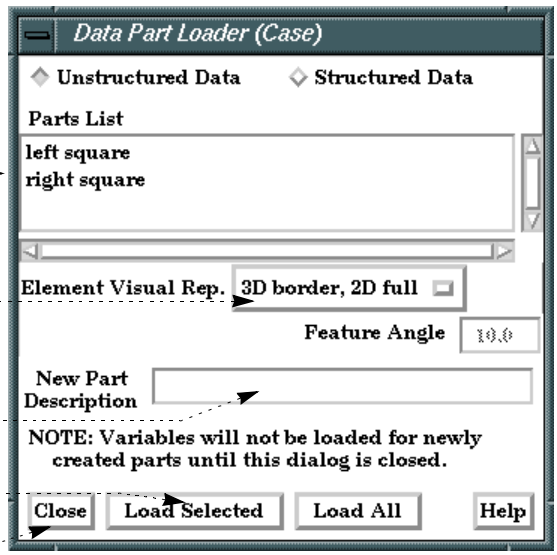
2. **Select the desired part(s) in the Parts list.**

3. **Choose the desired initial Visual Representation for the select part(s).**

4. **If desired, enter a name for the part (to use in the Main Parts list). The default name is the same as the entry in the Parts List.**

5. **Click Load Selected.**

6. **Click Close when done.**



To build **structured** parts from the EnSight Gold format data:

1. **If the Data Part Loader dialog is not open, select File > Data (Part Loader)...**
2. **Be sure Structured Data is selected to display only the structured parts in the Parts List.**
3. **Select the desired part(s) in the Parts List.**
4. **Choose the desired initial Visual Representation for the select part(s).**
5. **If the selected part has Iblanking, you can build based on the value (Inside selects cells where Iblank=1, Outside selects Iblank=0, All selects all cells ignoring Iblanking).**
6. **You can specify From, To, and Step IJK values for the selected part(s). The From and To values are inclusive.**

   Valid values in the From and To fields are numbers advancing from 1(the min for each part), or numbers decreasing from 0(the max for each part):

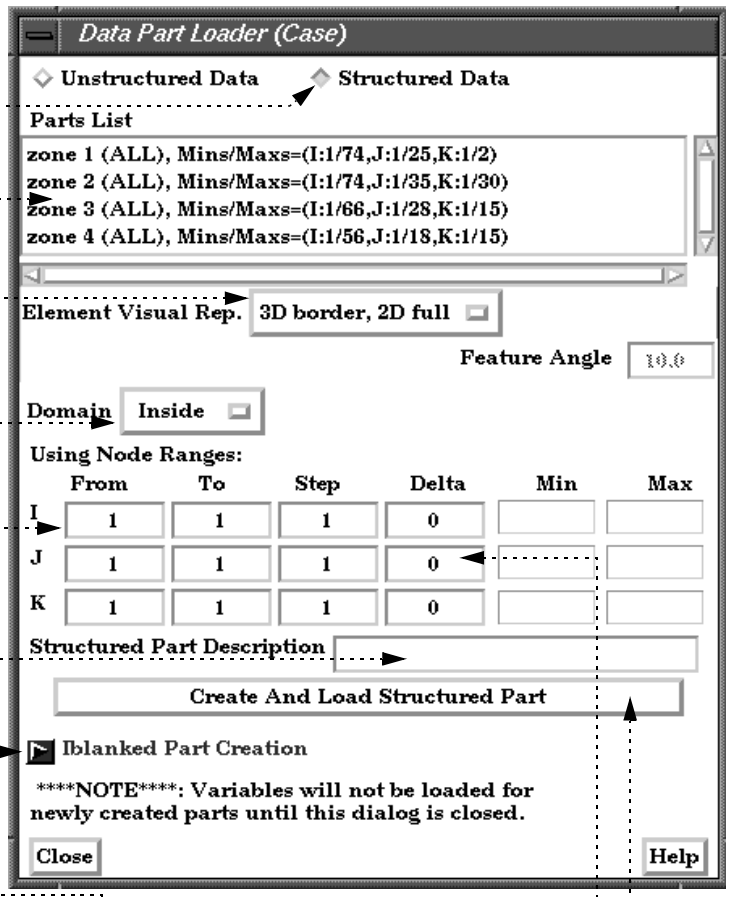
   1,2,3,... ---> <--- ...-3,-2,-1,0

   |----------|

   min (always 1) max (varies per part)

   If you specify values that will be outside of the range of an individual part, the proper min or max values for the given part will be used.

   The Min and Max fields are for reference only.



8. **If desired, enter a name for the part (to use in the Main Parts list). The default name is the same as the entry in the Parts List.**
9. **Open this turndown section to create unstructured parts based on boundary Iblanking from any parts created above.**
10. **Click Create and Load Part.**
11. **Click Close when done.**

7. **If you desire to extract multiple surfaces (at a constant delta) from the same zone, set one of the directions to the desired non-zero delta value.**

   This is a “blade row” kind of operation. Please note that this results in an unstructured part instead of a structured one.

Other Notes

You can reopen the Data Part Loader dialog at any time to build additional parts. Simply select File > Data Part Loader)... and build the desired parts as described above.

If your data fails to read, you should run it through the ens_checker program provided with the EnSight distribution to check for format errors.

See Also

How To Read Data
How To Use ens_checker
User Manual: **EnSight Case Reader**